

California Integrated Waste Management Board

Board Meeting

February 15-16, 2005

AGENDA ITEM 6

ITEM

Consideration of Scope Of Work For The Engineering And Environmental Services Contract
(Tire Recycling Management Fund, Multi-Year Funding)

I. ISSUE/PROBLEM STATEMENT

This item proposes that the California Integrated Waste Management (Board) approve a Scope of Work (SOW) for the Engineering and Environmental Services Contract. This contract is an important part of the Tire Derived Aggregate (TDA) research and market development program for waste tires in civil engineering application. Through this contract the Board will hire an engineering consultant to help provide education, design, and technical assistance to local and state government agencies and private entities who want to use waste tires in civil engineering applications. The engineering consultant will also provide construction management oversight on projects in which waste tires are used as light-weight fill, vibration attenuation layers, erosion control, water quality issues, drainage layers, and other civil engineering applications. The Contractor would assist the Board with research of new Civil Engineering Applications and the market development of those applications that prove to be a viable reuse for waste tires.

Under this Engineering and Environmental Services Contract, the Board, in partnership with Caltrans, would continue the projects that have been started as well as acquire new civil engineering projects in which waste tires could be utilized. The consultant chosen for this contract will work closely with Caltrans to get shredded tires accepted as a lightweight fill material option in Caltrans Standard Special Provisions.

In addition, the Board will utilize this contract to partner with local governments to develop new civil engineering applications for waste tires (i.e., such as the use of tire chips in sound wall construction or in landfill applications). This contract can be used to provide information to appropriate regulatory agencies to investigate possible environmental impacts from tire shreds; investigating these projects may be performed in partnership with both state and local government agencies.

II. ITEM HISTORY

The SOW for the previous Engineering and Environmental Services Contract was approved by the Board in January 2003. The Board awarded the previous contract to Dr. Dana Humphrey in May 2003.

III. OPTIONS FOR THE BOARD

1. Approve Resolution Number 2005-35 and the proposed SOW for the Engineering and Environmental Services Contract, Attachment 1.
2. Approve the SOW with specified changes.
3. Direct staff to make changes to the proposed SOW and return to the Board at a later date for further consideration.

IV. STAFF RECOMMENDATION

Staff recommends that the Board approve Option 1 and Resolution 2005-35.

V. ANALYSIS

A. Key Issues and Findings

The Scrap Tire Management Council estimates that 18–20 million tires were used in various civil engineering applications other than Rubberized Asphalt Concrete (RAC) in 1998, making this the second largest end use for scrap tires in the United States. California has conditions that could result in a major expansion of civil engineering applications using tire shreds. These conditions include: 1) Construction projects where soil conditions require the use of light-weight fill in areas such as the weak San Francisco Bay mud and the landslide-prone hillsides in the Sierra and along the coast; 2) Major landfill construction and expansions in which waste tires could be used as an alternative to conventional materials; and 3) A ready supply of waste tires.

From 2001 through 2003, California Department of Transportation used 54,253 cubic yards of conventional light-weight fill; this would be equivalent to 3.7 million tires.

In 2000, Caltrans used tire shreds as light-weight fill in the construction of the Highway 880/Dixon Landing Road interchange project. Conventional light-weight fill was replaced with tire shreds in the south bound on-ramp of the new interchange. In this project, 660,000 tires were used and saved the State of California \$250,000. The current Engineering and Environmental Services Contract was instrumental in the development and completion of this project. This is an example of how civil engineering applications using scrap tires can play a major role in managing California waste tires.

In 2003, Caltrans used TDA as light-weight fill behind a 200-foot section of retaining wall in Riverside County. This test section is part of a pilot project being conducted to help Caltrans assess how the use of TDA will allow them to design a new “thinner” retaining wall significantly reducing the amount of material used in their conventional retaining wall designs. This would result in a significant cost savings to the tax payers of California. The consultant selection process for the subject contract will utilize the Request for Qualification (RFQ) process in Title 14, Division 7, Article 2, Section 17022 of the California Code of Regulations described below.

The Board's *Five-Year Plan for the Waste Tire Recycling Management Program* (Five-Year Plan) allocates funding of \$500,000 for Civil Engineering Applications (CEA) as part of Research Directed at Promoting and Developing Alternatives to the Landfill Disposal of Tires (Research) and \$500,000 for the Market Development for New Technologies (Markets) using waste tires for Fiscal Year (FY) 2004/2005. These funds must be encumbered no later than June 30, 2005. Up to this point, staff has focused efforts to promote civil engineering uses primarily with Caltrans as described above. While this has been relatively successful, staff sees the need to focus more efforts on partnering with local governments in an effort to expand the market development-related aspects of this civil engineering program even more. This will require more resources to be expended by the Board's contractor and will require additional funding. Therefore, in the addition to the \$500,000 funding for CEA that the board allocated as part of the Research section of the Five-Year Plan for FY 2004/2005, staff is also proposing that \$150,000 be taken from the \$500,000 that

the Board allocated for Civil Engineering uses in the Market Development Section of the Five-Year Plan.

B. Environmental Issues

The contract will be used to help develop markets for waste tires. This will ultimately reduce the number of waste tires disposed of in landfills or illegal waste tire piles in California. The Board will coordinate all projects with other appropriate environmental agencies.

C. Program/Long Term Impacts

The contract will allow the Board to continue its efforts to develop environmentally friendly and economically beneficial markets for waste tires.

D. Stakeholder Impacts

Based on available information, staff is not aware of any stakeholder impacts related to this item.

E. Fiscal Impacts

Funding for Research directed at CEA and Markets for waste tires has been identified in the Five-Year Plan. On May 14, 2003, the Board adopted the revised Five-Year Plan covering FYs 2003/2004 through 2007/2008 that included \$1,000,000 for both CEA and Market Development for New Technologies (Markets) for FY 2004/2005. This contract will encumber \$500,000 from the Research portion of the Five-Year Plan and \$150,000 from the Civil Engineering Uses in the Markets section. All funds will be from FY 2004/2005. An additional \$500,000 for FY 2006/2007 is proposed in the *Proposed Biennial Update to the Five-Year Plan for the Waste Tire Recycling Management Program (Covering Fiscal Years 2005/2006-2009/2010)(Revised Five-Year Plan)* currently being developed bringing the proposed total for this contract to \$1,150,000.

F. Legal Issues

Based on available information, staff is not aware of any legal issues related to this item.

G. Environmental Justice

This Contractor will be required to perform in a manner consistent with the principles of Environmental Justice as defined in Government Code Section 65040.12.

H. 2001 Strategic Plan

The Board has been working to develop and promote new and existing civil engineering applications for waste tires.

Therefore, award of this contract will satisfy **Goal 2**, which is to assist in the creation and expansion of sustainable markets to support diversion efforts and ensure that diverted materials return to the economic mainstream and achieve

Objective 2, which is to encourage the use of materials diverted from California landfills and the use of environmentally preferable practices, products, and technologies.

VI. FUNDING INFORMATION

The Board's *Five-Year Plan for the Waste Tire Recycling Management Program*

allocates funding of \$500,000 for CEA as part of Research Directed at Promoting and Developing Alternatives to the Landfill Disposal of Tires and \$500,000 for the Market Development for New Technologies Using Waste Tires bringing the total funds available for FY 2004/2005 to \$1,000,000. These funds must be encumbered no later than June 30, 2005. This contract will encumber \$500,000 from the Research section and \$150,000 from the Markets section of the Five-Year Plan for FY 2004/2005. The *Revised Five-Year Plan* currently being developed calls for \$500,000 for FY 2006/2007 for research in civil engineering applications. It is projected that an additional \$500,000 will be added to the contract for a total of \$1,150,000. This contract maybe extended for time and money using multi-year funding.

1. Fund Source	2. Amount Available	3. Amount to Fund Item	4. Amount Remaining	5. Line Item
Tire Fund	\$ 500,000	\$ 500,000	\$ 0	Research for CE uses for tires
Tire Fund	\$ 500,000	\$ 150,000	\$ 350,000	Market development and New technologies for CE uses.

VII. ATTACHMENTS

1. Scope of Work, Engineering and Environmental Services Contract
2. Resolution Number 2005-35

VIII. STAFF RESPONSIBLE FOR ITEM PREPARATION

A. Program Staff: Stacey Patenaude

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B. Legal Staff: Holly Armstrong

Phone: (916) 341-6060

C. Administration Staff: Carol Baker

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IX. WRITTEN SUPPORT AND/OR OPPOSITION

A. Support

None at the time of the development of the item.

B. Opposition

None at the time of the development of the item.

California Integrated Waste Management Board

SCOPE OF WORK

Engineering And Environmental Services Contract

I. INTRODUCTION/OBJECTIVES

The primary purpose of this contract is to promote the use of waste tires in various civil engineering applications. Through this contract the California Integrated Waste Management Board (Board) will hire an Engineering Consultant to help provide education, design, and technical assistance to local and state government agencies and private entities which want to use Tire Derived Aggregate (TDA) in civil engineering applications. The Engineering Consultant will also provide construction oversight on projects in which shredded tires are used as light-weight fill, vibration attenuation layers, erosion control, and other civil engineering application.

II. WORK TO BE PERFORMED

The Consultant will need to have extensive experience in the use of waste tires in various civil engineering applications. The selected Engineering Consultant will be responsible for providing education, design, and technical assistance to local and state government agencies and the private sector on civil engineering projects that incorporate waste tires. The Consultant will also be responsible for collection and analysis of tire shred samples for quality assurance/quality control purposes. The Consultant must supply construction management to oversee projects using tires shreds in civil engineering applications. This Consultant must have technical expertise regarding seismic issues.

This contract can be used to fund research projects such as investigating possible environmental impacts of tire shreds on ground water and exploring new civil engineering applications for waste tires; such as the use of tire chips in sound wall construction to act as an energy dampener. This contract may also be used to provide technical assistance for other civil engineering applications like the development of erosion control options using waste tires.

III. TASKS IDENTIFIED

Types of work anticipated include, but are not limited to:

1. Develop and implement informational and educational seminars for the promotion of civil engineering applications of shredded tires.
2. Assessment of civil engineering uses of waste tires.
3. Develop technical standards for future regulations.
4. Assist staff in developing cost estimates for transportation and disposal/reuse of waste tires.
5. Develop/review engineering work plans for tire remediation projects.
6. Assist in the development of erosion control applications using waste tires.

7. Provide technical drawings and calculations for retaining wall designs where tire shreds are used as light-weight fill.
8. Assist staff with the installation of instrumentation in retaining walls and other applications in which tire shreds are used as light-weight fill.
9. Sampling, analyzing and classifying material for waste tire shreds.
10. Conduct pilot and bench scale test studies, lab studies, paper studies, and literature reviews into additional reuses and possible environmental effects of tire shreds.
11. Provide general assistance for work planning, presentations, and meetings.
12. Assist in obtaining permits from various regulatory agencies.
13. Provide construction management services, including daily work logs and construction reports.
14. Develop technical materials that will be used in the Board's education and market development efforts for promoting civil engineering uses of waste tires.
15. Consult with Board employees as well as other state and local agencies.
16. Provide monthly progress and cost tracking reports.

The scope of investigations may vary significantly, but design, testing, sampling and coordinating with Board staff on various projects simultaneously, will be required.

IV. CONTRACT/TASK TIME FRAME

It is anticipated that this contract would be awarded in June 2005, and expire in May 2007. If funding is available this contract may be extended.

Board staff will develop a work order for each task and the time frame will be included in that work order.

V. COPYRIGHT PROVISION

Contractor shall establish for the Board good title in all copyrightable and trademarkable materials developed as a result of this Scope of Work. Such title shall include exclusive copyrights and trademarks in the name of the State of California, California Integrated Waste Management Board.

VI. CALIFORNIA WASTE TIRES

Not applicable.

VII. WASTE REDUCTION AND RECYCLED-CONTENT PRODUCT PROCUREMENT

In the performance of this Agreement, Contractor shall use recycled content, used or reusable products, and practice other waste reduction measures where feasible and appropriate.

Recycled Content Products: All products purchased and charged/billed to the Board to fulfill the requirements of this contract shall be Recycled Content Products (RCPs), or used (reused, remanufactured, refurbished) products. All RCPs purchased or charged/billed to the Board to fulfill the requirements of the contract shall have both the total recycled-content (TRC) and the postconsumer content (PC) clearly identified on the products. Specific requirements for the aforementioned purchases and identification are discussed in the Terms and Conditions of the Contractual Agreement under Recycled-Content Product Purchasing and Certification.

The Contractor should, at a minimum, ensure that the following issues are addressed, as applicable to the services provided:

A. WRITTEN DOCUMENT PROVISION

All documents and/or reports drafted for publication by or for the Board in accordance with this contract shall adhere to the Board's *Guidelines For Preparing CIWMB Reports (available upon request)* and shall be reviewed by the Board's Contract Manager in consultation with one of the Board's editors.

In addition, these documents and/or reports shall be printed double-sided on one hundred percent (100%) recycled-content paper (unless 100% recycled-content paper is not appropriate, such as where many full color photographs will be used, then paper with a minimum of fifty percent (50%) recycled-content may be used). The paper should identify the post-consumer recycled content of the paper (i.e., "printed on 50% post-consumer paper"). When applicable, the Contractor shall provide the Contract Manager with an electronic copy of the document and/or report for the Board's uses.
To the greatest extent possible, soy ink instead of petroleum-based inks should be used to print all documents.

B. CONFERENCING PROVISION

Not applicable.

CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD

Resolution 2005-35

Consideration Of Scope Of Work For The Engineering and Environmental Services Contract
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WHEREAS, the State of California generates more than 33 million waste tires annually and over 25 million of these are diverted from stockpiling or disposal in landfills; and

WHEREAS, the Public Resources Code Sections 42800, *et seq.* established the waste tire program for the State of California and assigns responsibility to the California Integrated Waste Management Board (Board); and

WHEREAS, Senate Bill (SB) 876 (Escutia, Statutes 2000, Chapter 838) is a comprehensive measure that extended and expanded California's regulatory program related to the management of waste and used tires; and

WHEREAS, SB 876 requires the submittal to the Legislature of a comprehensive Five-Year Plan for the management of waste tires in California; and

WHEREAS, the Board approved the report *Five-Year Plan for the Waste Tire Recycling Management Program (2nd Edition Covering Fiscal Years 2003/2004-2007/2008)*, which included the following allocations for Fiscal Year (FY) 2004/2005: \$500,000 for Research Directed at Promoting and Developing Alternatives to Landfill Disposal of Tires and \$500,000 for Market Development and New Technology for Civil Engineering Uses. In addition, the Proposed Biennial Update to the Five-Year Plan for the Waste Tire Recycling Management Program (Covering Fiscal Years 2005/2006-2009/2010), which has not yet been presented to the Board for approval, currently contemplates a \$500,000 allocation for FY 2006/2007 for Research in Civil Engineering Applications.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves the Scope of Work for the Engineering and Environmental Services Contract in an amount not to exceed \$1,150,000, subject to availability of funds allocated to this program in the amount of \$650,000 for FY 2004/2005 and \$500,000 for FY 2006/2007, and directs staff to proceed with the Request for Qualification and to procure a consultant to be approved by the Board.

CERTIFICATION

The undersigned Executive Director, or his designee, of the California Integrated Waste Management Board does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the California Integrated Waste Management Board held on February 15-16, 2005.

Dated:

Mark Leary
Executive Director